

UNIVERSITI TEKNOLOGI MARA

**AN INTEGRATED VALUE
MANAGEMENT (IVM)
FRAMEWORK FOR
CONTRACTORS IN DESIGN AND
BUILD (D&B) PROJECTS**

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of the requirements for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.


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ABSTRACT

The concept of 'integrated value management' or IVM in the construction industry refers to joining a number of various elements into a specific project to move, operate and function harmoniously with the ultimate aim of achieving successful outcomes. Value management (VM) as a process improvement is vital to be embedded in D&B projects in relation to respond to the government's effort in enhancing innovation, productivity and quality of construction projects under the 10th Malaysian Plan. However, VM is been criticised for the fact that it unable to reduce D&B project delivery time and bring the project sooner to its operational phase. Furthermore, it was discovered that the negative attitude of project participants towards the VM process resulted in poor commitment and trust. The limitations of VM emphasised that VM alone cannot guarantee a successful project outcome. VM needs to be integrated with other process improvements (i.e., total quality management, risk management, partnering, value engineering and constructability) to form the IVM concept in order to deliver a successful D&B project. Thus, the aim of this research is to develop an IVM framework for contractors in D&B projects. The empirical research was undertaken by means of preliminary survey among four organisations (3 contractors' organisations and 1 client) that were involved in VM practices. It is followed by a questionnaire survey to 56 D&B contractors resulted in 31 valid responses being received. The results of the questionnaire survey were analysed using the Statistical Package for the Social Sciences (SPSS) software version 19. In order to underpin the questionnaire survey, semi-structured interviews with eight (8) experienced D&B contractors was conducted. Besides, four (4) case studies was carried out to provide a more thorough analysis of D&B projects which expected to reveal interesting information by the implementation of VM approach. Both data were analysed by thematic content analysis method. The findings from the research were used to develop an IVM framework which was validated to confirm its external validity. The findings revealed that VM was expected to be integrated with risk management, partnering and constructability throughout D&B project phases to form the IVM concept. It is to secure or increase contractor's profit margin, meet clients' needs and satisfaction and deliver a quality product. The IVM framework could provide more value added for D&B contractors in managing projects and achieving successful D&B project delivery.

TABLE OF CONTENTS

	Page
AUTHOR'S DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	v
LIST OF TABLES	xii
LIST OF FIGURES	xiv
CHAPTER ONE : INTRODUCTION	1
1.1 INTRODUCTION	1
1.2 BACKGROUND TO THE RESEARCH	1
1.2.1 Value Management (VM)	2
1.2.2 Process Improvement	3
1.3 PROBLEM STATEMENTS	6
1.3.1 The Current Use of Value Management (VM) as a Process Improvement	6
1.3.2 Other Process Improvements Needed for D&B Projects	7
1.3.3 The Significance of Integrating VM with Other Process Improvements in D&B Projects	7
1.3.4 Integrated Value Management (IVM) Framework for Contractors in D&B Projects	8
1.4 RESEARCH QUESTIONS	8
1.5 AIM AND OBJECTIVES	8
1.6 SIGNIFICANCE OF THE RESEARCH	9
1.7 SCOPE OF RESEARCH	9
1.8 RESEARCH METHODOLOGY	10
1.9 RESEARCH DESIGN	10

1.10	THESIS LAYOUT	13
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CHAPTER TWO : DESIGN AND BUILD (D&B) PROCUREMENT SYSTEM		
	AND VALUE MANAGEMENT (VM) IN CONSTRUCTION	16
2.1	INTRODUCTION	16
2.2	DESIGN AND BUILD (D&B) PROCUREMENT SYSTEM	16
2.2.1	Definitions	16
2.2.2	D&B Operation Process	18
2.2.3	D&B Procurement System in Malaysia	21
2.2.4	The Significance of D&B Procurement System	23
2.2.5	The Critical Challenges of D&B Procurement System	29
2.2.6	Resolution to the Critical Challenges in D&B Projects	34
2.2.7	Summary of Part 1	40
2.3	VALUE MANAGEMENT (VM)	42
2.3.1	Definitions	42
2.3.2	The Principles of VM	44
2.3.3	VM Implementation across the Globe	45
2.3.4	VM in the Malaysian Construction Industry	47
2.3.5	The Significance of VM in D&B Projects	52
2.3.6	The Limitations of VM	53
2.3.7	Summary of Part 2	56
2.4	SUMMARY	58
CHAPTER THREE : INTEGRATED VALUE MANAGEMENT (IVM)		59
3.1	INTRODUCTION	59
3.2	PROCESS IMPROVEMENTS	60
3.2.1	The Choice of Integrating Process Improvements for D&B Projects	66